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AUTHOR Beatty, John E.
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ABSTRACT

Beginning with an analysis of conceptions of time with a particular emphasis on examining quantitative time use research literature for its manifestations of personal and social values, this paper proceeds with an overview of the literature on time use and the issues involved in its measurement. The central questions in this paper dwell on the quality of the available data on mass media time use and, perhaps more importantly, on the conclusions which can and should be drawn from these data. The paper argues that the qualitative approach to time use studies (in particular, television viewing habits) would ideally precede any quantitative analysis, especially one utilizing historical data sets. The paper attempts to demonstrate that empiricists have not always acknowledged their own cultural and personal values, as well as limitations in their methodologies, in the collection and analysis of time use data. The paper concludes that there is little cause or support for alarm over the results of mass media time use research. (Forty seven references are attached.) (RS)

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IT'S ABOUT TIME: REVEALING WHY AND HOW SOME EMPIRICISTS CLAIM TV WASTES OUR TIME

John E. Beatty

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The author is a Ph.D. candidate in Journalism at the University of Texas at Austin.

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IT'S ABOUT TIME: REVEALING WHY AND HOW SOME EMPIRICISTS CLAIM TV WASTES OUR TIME

Investigations of the use of time are necessarily constrained by cultural conceptions of time itself. This paper consists of an analysis of those conceptions, with particular emphasis on reading quantitative time use research literature for its manifestations of personal and social values. These values tend to reveal an urgent sense of concern for the public's use of time, often accompanied by disparagement of popular leisure-time activities such as television viewing. The analysis reported here begins with a discussion of time based on the framework of E.T. Hall (1959), followed by analysis of the methodologies of social scientific time use research and their inherent limitations. It is maintained that the evidence of personal and cultural biases, and the shortcomings of the science, undermine the position of those such as John Robinson and colleagues who bemoaned the colonization of our leisure time by television during the 1960s and 1970s (Robinson, 1977; 1981; Robinson and Converse, 1972a; 1972b; Sahin and Robinson, 1980).

The critical perspective adopted here entails a skepticism about the testing of hypotheses, and an ethical concern for the production of statistical results which define themselves as a privileged form of truth. Nevertheless, subsequent papers in the current investigation will report on quantitative analyses of an extensive data set covering mass media time use in the United States from 1920 to 1985. The availability of over 500 data points allowed for a comparison of Robinson's claim to another description of the pattern of media time use since the early 1960s as well as a summary of the data and their quality over a much longer interval. Leaving aside these quantitative analyses, the position remains from this paper that Robinson's conclusions, and others' like his, are based on quantitative smokescreens hiding anti-populist biases, or in some cases fears of media hegemony. It is important to remind ourselves that social scientific notions of time as a commodity which can be used in more or less valuable ways are culturally based and therefore value-laden. We should first recognize that ours is a western conceptualization of time, and that even within this view of time there are various possible opinions as to how it is structured and what constitutes "valuable" uses of it. This recognition may be implicit in much of the time use literature, but it is seldom acknowledged if indeed it has been arrived at.

This paper proceeds, then, from a discussion of the concepts of time and its importance to an overview of the literature on time use and the issues involved in its measurement. The central questions for research center on the quality of the available

data and, perhaps more importantly, on the conclusions which can and should be drawn from these data.

1.1 CONCEPTUALIZATIONS OF TIME

Concern over the use of time may seem natural to most Americans, and by extension, to most modern cultures. Such a concern is of course based on cultural values which are by no means universal, or even common to all Americans. The cautions raised by Shoemaker (1987) are relevant here in that any analysis of national scope is likely to ignore differences among subcultures or regions. Beyond this is the realization that the common American conception of time is vastly different from that of some eastern cultures, and substantially different from many other western or European-derived societies. E.T. Hall has been instrumental in pointing out the ways in which Americans either stubbornly or naively assume that their values are better than others', or at least that their values are likely to be held by others. In fairness it should be added that this attitude has since been shown to be a broadly cross-cultural trait. Americans' rather unique formal conception of time is based on such notions as linearity or ordering, continuity, duration, depth, and what Hall (1959) calls "synthesisity."

Synthesisity refers to the idea that time--the minutes, hours and so on--have to "add up", in contrast to some African cultures, for example. Clearly this cultural construct is fundamental to the undertaking of time use studies, particularly of the 24-hour time budget which Robinson and others favor. The fact that time need not "add up" in other cultures means, at least, that we should be wary of generalizing across cultures. It also suggests that concern over the demands on our time could be reduced simply by recalling that our "time" is an artificial construct, not a property of the natural world. Hall points out that:

> the reason why time has to add up is that we start with the assumption that we are dealing with a system and that there is order in the universe. We feel it is man's job to discover the order and to create intellectual models that reflect it. (p. 133)

This is just the sort of assumption which underlies much of our positivist science and statistics, modes of analysis which are still subject to Kuhnian paradigm shifts (Kuhn, 1970). This issue will not be pursued in detail here, except to note that

there is growing debate over basic statistical notions such as randomness or disorder (McKean, 1987) and that application of science to social questions is the subject of extensive and frequently impassioned discussion (e.g. Allen, 1985).

The notion of linearity or ordering also is consonant with the dominance held by the positivist tradition in the realm of human inquiry. There are in fact cultures in which time is seen as circular, with the future folding back onto the past. Acceptance of linearity has lead to reliance on unidirectional cause-and-effect models of explanation, following the lines of Cartesian thought (Slack, 1984). Thus, for example, we are driven to look for the effects of a technology, such as television, on society, without also asking how society's needs and wants might have contributed to television's development. The technology is somehow seen to have arisen first and autonomously, and then its impacts, such as the time devoted to its use, are studied. We may not be able to learn from circular time conceptions, but we can and should be wary of overemphasizing a single direction of cause and effect.

It seems more intuitive or familiar to examine the effects of television (or other mass media) on society rather than the reverse pathway, that is, the argument that society "caused" television to be developed through affluence, available leisure time, and the technological capacity to create a new form of entertainment to meet the new demand. It is worth trying to create such an argument here, since it illustrates how our concept of linearity is tied up with our notions of modern society.

Essentially, the conditions in most industrial societies after the industrial revolution have been said to involve a change from a more collective society to one in which people were atomized, or isolated from the artisans and neighbors they would have interacted with in the past. This loosely follows Toennies' Gemeinschaft/Gesellschaft characterizations of the two periods (Toennies, 1957). People would then feel a need for more interpersonal communication, or at least for some surrogate. Television has arguably served just that sort of function, as evidenced by the unexpected popularity of day and nighttime soaps, as well as talk and advice programs. Media in the twentieth century have also exhibited a trend toward increasing home use. Television logically follows the trend seen in the shift from live theatre and movies to radio and records. People's need or desire for more sophisticated home entertainment could explain the rise of television and the sudden popularity of video cassette recorders. Finally, the demands of many modern lifestyles may have contributed to a need for relief from information overload and the urgent, active way we deal with our time. These particular aspects are dealt with in more detail in

section 1.2.

The argument as constructed above is admittedly speculative, but it is at least plausible. As such it should receive equal emphasis in the literature with the more common discussion of the effects of television on our lives. The fact that it has not is a function of the linearity of our thinking, as well as of an earlier technological determinism which is in part related to the dominance of positivism and science mentioned previously. Trying to sort out these schools of thought and conceptual traditions may be futile. What is being attempted here is simply to catalogue alternative means of conceptualizing under which concern over the "colonization of leisure" would be reduced or even dismissed, regardless of what the data say. A related aspect of our conception is that of continuity. This notion is actually best expressed as continuity in the limit, since it really derives from the calculus of Descartes and Leibniz who argued that infinitely small but still discrete intervals (of time or distance) change in the limit to a continuous function. This brings with it the idea that time "flows" and that it does so at a constant rate. From that it is a small leap to operate under the assumption that all time is to be equally valued, since the rate is constant, and that unused time is wasted, since it will flow on without you. In the least, this discussion should remind us of the point made by Kline (1977):

> For the reality of our conceptualization [of time] is always linked to the character of the mathematics we bring to bear on the concept. (p. 187)

Kline therefore argues that most research concerning time assumes that "time spent is time spent", which translates to assumed homogeneity of media content and of the cognitive involvement of media consumers. In other words, our mathematical concept of time leads us to think in terms of equality of units of time, rather than to emphasize the qualitative differences in both the content and the act of viewing.

It is also possible to conceive of time without the concept of duration that is, the idea that time is something that occurs between two points. Hall (1959) cites the Hopi culture of North America as an example of a society which does not measure time nor do they seem to have a sense of time "elapsing." In fact, time for the Hopi is of several types and is interpreted in connection with the growth of plants and animals. In this case there is an American subculture, albeit a small one, which would not be amenable to time use studies of the sort discussed in this report.

Our dominant concept of time also is at variance with many others in regards to the past and the future, aspects which Hall

refers to as depth. Most striking may be the native Sioux culture which does not have language to express these two concepts of time. Some Oriental societies have a much more extended view of the future than do Americans, while in other cultures such as Iran's the past carries more weight and the future has less reality attached to it. While most of our society attaches some weight to both the past and future, we seem to do so within a restricted interval, with the result that changes over relatively short periods would appear to other cultures to be overemphasized by us. In the case of the time use data, this would clearly apply to Robinson's concern over lifestyle changes from 1965 to 1975, or indeed the span of 65 years covered in this study.

All of the above are fundamental aspects of our concept of time, usually taken for granted even by social scientists who are researching time-related issues. There are also more surficial but equally important aspects which are more often recognized as being culturally derived and therefore open to change. The former were referred to here as conceptualizations of time, and the latter are discussed below as "valuations" of time. The distinction here is adapted from Hall's two groups which he calls formal and informal.

1.2 VALUATIONS OF TIME

Above all, it is apparent that Americans and many Europeans place a very great value on time. Robinson (1977) notes that it was Benjamin Franklin who coined the phrase "time is money," with the result that we discuss the two in similar terms such as saving, spending or buying time and money. The United States has not been a leader in the study of time use, however. Most socialist eastern European nations have done much more extensive research, often as part of centrally-planned economies. Perhaps this socialist tradition has led Americans researchers and planners to be reluctant to emphasize the role of time in our lives, based on their democratic bias against what they see as government intrusion on people's freedoms. Nevertheless, the time budget studies of Berk and Berk (1979), Robinson (1977), Szalai (1972), de Grazia (1962), Sorokin and Berger (1939), Lundberg et al. (1934) and others all start with the assumption that time is highly valued.

Other evaluative components of our conception include the weight given to activity, variety, urgency and monochronocity. We generally value time spent in active pursuits over those that are more passive (Hall, 1959). Many other cultures such as the Japanese, and some Arab and Indian ones, do not make a distinction, let alone an evaluation, between activity and

passivity. Hall notes how we stop in on people because they "don't seem to be doing anything."

It is this aspect which seems to be behind much of the concern over time spent with the mass media, and television in particular (e.g. Coffin, 1955). There are numerous instances in the literature of this subjective bias against passivity, but perhaps none more extreme than that of Meerloo (1954), a physician writing in the Journal of Nervous and Mental Disease. He claims that he had treated three cases of "reactive apathy" caused by television, wherein "children become lazy, even apathetic peepers" (p. 290), refusing to leave the television screen. Both children and adults were said to "merely sit and watch the pseudo-world of the screen" (p. 291, emphasis added). Television viewing was apparently seen by some scholars of the time as even less desirable than doing nothing.

This concern over passivity was not revealed only during the hysteria surrounding television's period of diffusion. It had been a theme of media criticism for some time previously, as exemplified by Lazarsfeld and Merton's (1948) charge that mass culture exercised a "narcotizing dysfunction" on many of its adherents. Here also there is the assertion that consumers of mass culture are in such a state of apparent passivity that they must be in some sense drugged or hypnotized. It was later perpetuated in part by McLuhan's (1964) concepts of "hot" and "cool" media. Television was said to be a "cool" medium in which the viewer had to complete the image provided by the series of dots, as opposed to perceptually complete or "hot" media such as film or radio. Television was felt to be changing the very fabric of society, primarily because its "audiovisual stimuli elicit(s) high but passive audience participation" (DeFleur and Ball-Rokeach, 1982; p. 184). The point here is not whether McLuhan was right or wrong, rather that he and others were so concerned over viewers' passive involvement with television.

Similar valuations of time are potentially behind other claims that television, or indeed other popular entertainments, are 'stealers of time" as Meerloo (1954) puts it. Robinson (1977) refers to investigations into how much leisure time is "squandered on television" (p. 4), eventually admitting in the same reference that:

> The available data do not tell us how much of the free time Americans devote to television represents a squandering of this precious human resource. (p. 179)

He also reports that "Americans are no more addicted to television than are people in other countries" (p. 177). These statements may also be evidence of dissatisfaction with the content of television, as much as with the act of viewing, but

they do imply an attitude that viewers are passively wasting their valuable time in an addicted state. Questions of taste will be returned to later in this section.

Despite a forty-year history in this country, television has still not escaped claims that it possesses addictive powers. A recent case was reported in which a neighbor chopped down a tree reputedly to improve his satellite reception, (Ravo, 1988). The headlines in the New York Times read: "A Tall Oak Falls Victim To a TV-Age Obsession" (p. B1); and "A TV Addict Takes Disney Over a Tree" (p. B2). The perpetrator had admitted that "We're TV addicts. Me and my wife watch it all the time." While this individual may indeed be something of an addict, he is only one person and one who could well be suffering from other problems which led to his television viewing habits. The newsmedia apparently accepted his self-diagnosis because it fits with their belief, and they felt it to be a story which the public could accept, having been exposed to such addiction stories by other "objective" news media. Some academics also continue to perpetuate the idea of addiction, or something close to it, as evidenced by Kurtz's (1984) substitution of household for personal data in reporting average personal daily viewing time for children. A similar zeal may be read into a paper by Medrich (1979) who titled a Journal of Communication study: "Constant Television: A Background to Daily Life." It turns out that a "constant television household" was one in which a child said that the set was on "most of the afternoon," "usually on during dinner," and also on "most of the evening." This is hardly constant, even if the child were to be a good source of information, and does not justify the irresponsible summary statement that "For over one-third of inner city families, the set is always on" (p. 171). There is also a suspicion of a classist bias in the portrayal of inner-city families as constant television users (was the same study reported for higher-income groups?) and in the reporting of the "TV addict" who uses language such as "Me and my wife."

If activity is valued in our society, a variety of activities is considered even more worthwhile. This again mitigates against activities such as television viewing which can consume relatively large blocks of time. It also means that boredom is something to be avoided. Robinson (1977) cites surveys showing that having "too much time on one's hands" is for Americans more dissatisfying than having too little. Feelings of boredom or the slow passage of time are also more often experienced in cultures that have a great sense of urgency, as opposed to ones that are more relaxed (Hall,1959). The United States is generally characterized as a culture of urgency, although there are of course wide regional variations. Our rather extreme positive valuations of activity, variety and urgency are all related and tend to act together to cause concern

over much of our media consumption behavior.

The final informal construct, monochronicity, is in part a reformulation of some of the preceeding concepts. Monochronic cultures, of which the United States' is a prime example, prefer to carry out one activity at a time. They therefore place heavy emphasis on scheduling and promptness, clearly employing a linear time which is strictly synthesized. In contrast, polychronic cultures permit and even value the carrying out of several activities simultaneously. This means that schedules are not as important since it is acceptable to continue interacting with one person while another is waiting, or even to combine the two appointments. Various Latin cultures are the typical examples of polychronic cultures. Thus we tend to attach relatively great importance to whatever we are doing, since there is usually an identifiable primary or sole activity, and because we value our time in general. Researchers and respondents are thus likely to see media use as generally being independent from obligatory activities and even other leisure pursuits, and to neglect or downplay media use at work, work being done during leisure-time media use, and media use combined with other leisure activities.

Early studies of media use tended to neglect or deny the possibility of overlapping activities. De Grazia (1962), for example, expressed surprise that the reported hours of television use in some studies added up to one hour more than the whole leisure-at-home category recorded by other researchers. The importance of simultaneous activities was soon widely recognizedby researchers, but the assumption that watching television, for example, is an all-encompassing activity seems to die hard. It might be instructive to study the extent to which Latins in the United States are more likely to be polychronic with respect to media usage than are other Americans.

The standard diary approach to the study of multiple activities is to ask subjects to identify their primary activity and anything else they were involved in at the time. These other activities are then classified as secondary (Robinson, 1977). While this is an advance over single-activity research, it still reflects a monochronic view of time in that ordinal names are given to what might otherwise be conceived of as nominal categories. In the case of television, primary viewing might just as well be labelled "attentive" and secondary viewing (perhaps while eating a meal) could be classified as "tangential." There need not always be a single primary activity in the minds of the subjects, even if they are part of an essentially monochronic culture. Insistence on identifying the primary activity is likely to encourage subjects to underrepresent the extent to which they do or even think about other things while using media. The use of ordinal categories also implies that one type of activity, the primary one, is

somehow more important than that which is labelled as secondary.

Most of the preceeding refers to cultural conceptions of time, either formal or informal. The next level of analysis involves the valuation of different types of time use within a given culture, in particular the distinctions between work and leisure time.

Americans' concern over the uses of leisure time involves most of the aspects of time described above plus the idea that leisure time is somehow more valuable than time spent in work and other obligatory activities. Sahin and Robinson (1980), quoting Marx, describe work as the realm of necessity as opposed to leisure which they see as the true realm of freedom. They also trace this conception back through Adam Smith to the ancient Greeks, who felt that leisure was the ideal state and the path to creativity and wisdom. Elsewhere Robinson is quoted as saying:

> It's in free time that people have the opportunity to become most human, and we're all trying very hard to increase our share. (Franklin, 1986; p. 59)

Holman (1961) expressed a similar view, implying that her westernized concept of leisure's importance should be the norm for any society:

> Social welfare in a country to a large extent is dependent on the proper utilization of leisure. (p. 17)

This supposition was combined with the American bias against idleness to produce the following admonition:

> Some persons must be directed and guided in its [leisure time's] proper use, otherwise leisure may become synonymous with idleness or delinquency. (p. 17)

At this level of analysis there are more likely to be detractors of the common viewpont than there are at the formal or informal levels described above. Almost all Americans would say that our time is linear, and most would value activity over passivity. Meyersohn (1972) was one researcher who took stock of the national character and concluded that Americans had tended to opt for additional work rather than leisure when the choice was presented, implying that leisure time may not be valued as highly as Robinson and Holman suggest. Meyersohn notes that most Americans feel that work provides them with self and social validation more than leisure does. This attitude is consistent with a socialization to the Protestant and other work ethics. It

has also been taught through the traditions of patriotism and Puritanism which Thorndike (1937) hoped would lead people to follow the "true gods of truth ... or utility" as readily as the "false gods of entertainment" (p. 469). Thorndike's comment suggests the additional influence of John Stuart Mill's utilitarianism in the valorization of work within the Anglo-American tradition.

Robinson's own data (1977) include three surveys of satisfaction which all show slightly higher levels for work than for television and most other leisure activities, although another survey taken in 1976 found that "In short, leisure is pleasant and work is unpleasant" (Berk and Berk, 1979; p. 230). Recent data (Louis Harris and Associates, 1988) show a continued decrease in the amount of leisure time reported by Americans, from 26.2 hours per week in 1973 to 16.6 hours per week in 1987. The same study reports an increase in the average work week, including travel, from 40.6 hours in 1973 to 46.8 hours in 1987. The Harris polls did not address issues of affect, but it seems unlikely that such substantial trends in time use would develop without enjoyment of work time greater than, or at least equal to, that of leisure time, no doubt coupled with forces of economic necessity. In any case, assertions that leisure is the time in which people are "most human" or that social welfare depends on its "proper utilization" are at least debatable and at most counter to the prevailing culture. They provide potential evidence of a strong bias against the ways in which leisure is popularly utilized.

A final consideration in the valuation of time involves assumed ordering of the types of leisure activities undertaken. Even if leisure is not necessarily valued over work as has been claimed by others above, it is likely that particular leisure activites are held by society to be inherently more worthwhile than others. Active leisure pursuits are more valued than are passive ones, at least in the eyes of academics as discussed above. Within the media there would seem on the surface to be little in the nature of reading that would make it preferred societally over television viewing, at least in terms of activity versus passivity. The discussions of television's hypnotizing powers, McLuhan's concept of a cool medium, and Robinson's sense of squandering time and television addiction are all consistent with another subjective judgment most easily characterized as elitism.

Robinson's concern over his claim that television has colonized our leisure time has been shown to be in part a result of the formal and informal aspects of time in our society. No doubt many others share the same concepts of time without his attitude toward the content of the medium. This attitude is most explicitly stated in his 1977 book, How Americans Use Time:

> If there is any conclusion on which critics of the American culture can agree, it is the deplorable state of our television. (p. 173)

He also sought to explain "why so little television content is intellectually demanding" (p. 179), and referred to theatres and museums as examples of "higher culture" (p. 108). Robinson and Converse (1972a) refer to television programming as "notoriously unsophisticated" (p. 210), as opposed to "sophisticated commentary magazines" (p. 201). The irony of these clearly elitist statements is that they often derive, as in Robinson's case, from scholars adopting a Marxist perspective. The writings of T.W. Adorno (1954), a leading neo-Marxist of the Frankfurt School, describe television content as presumptuous, vulgar, stereotyped, and cliched, capable of lowering the general level of taste in society. One tends to see in such writing an uncritical acceptance of the standard ordinal scale of taste which defines "high" culture (usually theatre, literature, classical music and some cinema) as being superior to popular or "low" culture (usually commercial television and radio, popular music, magazines and many movies). It goes almost without saying that most consumers of popular culture enjoy what they consume and do not feel that it is a waste of time. In data reported by Robinson (1977), television received an average "satisfaction" rating of 2.4 on a scale of one to seven where 1 = "satisfied" and 7 = "unsatisfied." Other leisure pursuits, including active ones, were rated from 2.2 to 2.6. Other scales using semantic differentials such as like/dislike produced similar results.

Most of the preceeding is a form of caveat for those who might uncritically accept both the data and the conclusions of social scientists, given that their methods and their concepts of time and its use are arbitrary or even biased and elitist. The final area to critique is that of the methods of data collection particular to time use studies. Here there are points of criticism which most of the researchers readily acknowledge, as opposed to the other concerns raised here which are either ignored or in some cases denied under the guise of objectivity. This review combines coverage of some of the major studies with critiques from the writers and this author.

1.3 MEASUREMENT OF TIME USE

This section addresses three aspects of the time use data: representativeness of the respondents; item construction; method of data collection. While all of these areas are relevant to time budgets as well as media-only studies, the time budgets are

dealt with first in connection with the first shortcoming. The number of complete budgets is small enough that their history can be dealt with briefly before moving on to a more general discussion of problems common to any estimation of time use.

Despite the value placed on time in American society, there have been few comprehensive studies of time use. Robinson and Converse (1972b) located about a half-dozen studies from the 1930s to 1970 which they deemed rigorous enough to be of much interest, noting that "even here methodological defects and incomparabilities abound" (p. 21). They were looking for complete time use budgets, which obviously give a better picture of the impact of any single activity such as television viewing than do surveys of some subset of daily activities. Robinson (1977) suggests that studies of a limited number of activities tend to overestimate those pursuits since the respondents know what is being measured and want to please the researcher by appearing to be highly involved. Nevertheless, it is still possible to examine trends in media use by looking at subset studies, in the main because there are so many more of them. This study examines over 170 papers which include less than ten time budgets.

The earliest recorded time budget seems to be one done by Bevan in 1913, but which was not locatable. Many of the early studies such as Bevan's were limited to one segment of the population such as working men in his case, or students, children, homemakers, farmers or the unemployed. The search for comparable multi-activity national data sets by Robinson and Converse was in effect a futile one, reducing Robinson to reliance on the 1965 and 1975 national surveys from Michigan's Survey Research Center (SRC) (Sahin and Robinson, 1981). The closest equivalents are the studies by Lundberg et al. (1934), Thorndike (1937) and Sorokin and Berger (1939). Lundberg's study was composed half of college students and half of adults, with different questions used for the two groups, and it was carried out in affluent Westchester County, New York. Thorndike reanalyzed estimates from a 1934 study by Nelson involving 500 "business girls" connected with a Y.W.C.A. in New York City. He did acknowledge that the accuracy of national estimates based on this sample was uncertain. The Sorokin and Berger research attempted to be national in scope but concentrated on female homemakers and also suffered from a response rate of about 10 percent. Low or unreported response rates are also common to much of the early work, Lundberg's for example being about 50 percent.

Most of the early time budgets and media use studies did not suffer from inadequate sample size. A more common drawback was the limitation of the sample to one city or state, with effort essentially wasted on samples as large as 55,000 within one state

as was the case with an Ohio study done by Dale (1935). The data reported in chapter three will be examined for regional distribution and for the relative numbers of urban, rural or statewide sampling frames.

The 1965 SRC national data set which formed the basis of Robinson's colonization of leisure assertion was also not truly representative. Most importantly, it was an urban-only sample, designed to conform to similar studies in 11 other countries (Szalai, 1972). Children and unemployed and retired persons were also excluded. These cross-national data are of interest and do provide some alternative means of examining the impact of television across societies which have somewhat differing informal conceptions of time and its value, although they are all western. They are examined in a subsequent paper. The effect of the urban sampling frame was to exclude 36 percent of the United States' population from the 1965 study and the omission of retirees and unemployed excluded 22 percent of the urban sample (Robinson and Converse, 1972b). The 1975 SRC data, on the other hand, were fully national but the same segments were excluded from the reports in order to make the two data bases comparable (Robinson, 1981).

Most studies have found more viewing by those with lower incomes (Coffin, 1955; Robinson, 1977; Ogan and Kelly, 1986) and with less formal education (Roper Organization, 1979; 1983), although at least one researcher claims that there had been a convergence in viewing across educational levels during the 1960s and early 1970s (Comstock, 1978). Both of these factors would tend to mean that the SRC data underestimate television viewing, and indeed most other surveys for these two years report 50 to 100 percent more viewing, depending on whether secondary viewing is included in the SRC estimates. This might seem to weaken the case for television's colonization of leisure, except that Robinson's central point seems to be the relative amounts of viewing in 1965 and 1975. He acknowledges in a footnote that while the SRC data showed a 48 percent increase in viewing over this period, four other surveys of television use reported the following percent increases: Nielsen meters 10% ; Nielsen diaries 18% ; Roper 15% ; Robert Bower (1985) 20% (Robinson, 1981). These average to 16 percent, with the associated implication that the SRC figures could be said to overestimate the growth of television viewing over these ten years by 200 percent.

Subsequent to the 1975 SRC survey, Berk and Berk (1979) appear to have completed the most extensive daily time budget study. This involved more of a processual and less of a true budget approach, with emphasis on the patterns and sequencing of daily activities. In fact, time use estimates are given only for some of the dayparts for women, and evenings for men, so that daily media use cannot be compiled from the published data. In

addition, media use outside the home is excluded, and single adults and those living in communities smaller than 50,000 are not sampled. It is perhaps symptomatic of social science in general that an extensive project such as this was carried out without the reporting of some of the available basic summary data, and without comparability to related previous studies. The same problem, fundamental to concerns over the "quality" of the data collected for this study, is discussed below in relation to the conceptually simpler media-only time use estimates.

Time use budgets face particular problems in operationalizing terms such as "work" and "leisure", given, for example the fact that people may read or relax on the job, or take some of their work home. These larger categories do not affect this study, except that budgets may influence the media time use estimates as noted. The best estimator of trends in media time use would be the ratio of mass media (or single medium) time use per day to total available free time per day. At least two American studies did produce correlations between media use and total free time: Ogan and Kelly (1986) found a weak positive relationship (r=.21); Robinson (1981) found a stronger relationship between television use and free time (r=.43). These data suggest that increased viewing is to a moderate extent simply a function of increased free time and as such less cause for concern than would be an increase in viewing during a period of unchanging free time.

In the absence of total leisure time estimates, the American data in subsequent papers is compared to estimates of the average work week. Such comparisons do leave unanswered the question of the amount of time devoted to obligatory non-work activities such as personal care and sleep.

Changes in the work week and in available free time are examples of the underlying societal framework against which changes in media use ideally should be measured. Two samples which each were representative of the adult population of their day would not be strictly comparable if there had been significant changes in the work week or leisure time, or in the employment rate, the percent of females in the workforce, the age structure of the population, family composition, the rural versus urban distribution, and perhaps the education and disposable income levels. In other words, the ideal study would control for changes in all of these demographic variables since they are all potential predictors of media use. Robinson (1981) was able to carry out an analysis involving some of these variables on the two SRC data sets and he did find that the increase in television viewing remained after demogaphic controls were added. However, he did not compare the samples to the national demographics to determine if they were representative across all these variables. He also does not

report these corrected data and proceeds to base his conclusions on the uncorrected figures. Nevertheless, extrapolations about the potential trends in media use should at least acknowledge, as Robinson has done, the importance of interpreting time use estimates in the context of major demographic shifts. Recent trends indicate, for example, that the oldest age group is currently among the fastest growing in the United States. This age group has traditionally watched less television, seen fewer movies, and read more books than younger adults (de Grazia, 1962). Any continued rise in the percent of women working outside the home would also lower the national average television use if this segment continues to have one hour less free time per day than do employed males and two hours less per day than females homemakers (Robinson, 1977).

A final problem of representativeness involves the time of year in which sampling was carried out. Both of the SRC studies were done primarily in the fall, when free time is reported to be about 10 percent higher than in the spring (Robinson, 1977). It is also a time of above average television viewing given the ratings sweeps weeks which have been held in November as far back as 1965. Seasonal variations may not be as great as variations across demographic groups, but systematic seasonal biases could significantly distort results. The same can be said for the distribution of estimates within the week. In many cases single days or some portion of the week was the basis for estimation of "daily" media use. Even the extensive diary study by Berk and Berk (1979) excluded weekends, although the authors admitted in a footnote that "this was a painful choice" (p. 50).

A wide variety of <u>items and methods</u> have been used to estimate time use. Several promising sources were not incorporated into this report because they employed frequency rather than elapsed time measures, often asking respondents whether they used a given medium "frequently," "sometimes," "rarely" or "never." This problem was also noted by Robinson and Converse (1972b) and Sorokin and Berger (1939) in reference to earlier studies. Other surveys simply recorded what percentage of resondents had used a given medium "yesterday," or over some longer interval.

Early studies which did generate time use estimates at times did so by asking respondents to describe a "typical" day's activities (Sorokin and Berger, 1939). The Roper Organization, for one, stills asks its respondents to estimate their television viewing "on an average day" (Roper Organization, 1983; p. 7). This adds another element of subjectivity in that people may forget that they often don't watch television or listen to the radio every day or that they are often interrupted in their media use (Robinson, 1977). The "typical day" approach was generally replaced by asking subjects to estimate time spent "yesterday,"

although it was recognized early on that this might not produce realistic estimates within a given study due to the variability in many daily activities. Sorokin and Berger (1939) claimed their own studies showed that at least four weeks were needed to secure an adequate picture of people's behavior.

Occasional use has been made of pre-planned surveys wherein respondents are asked to record time spent in activities "tomorrow." This was the procedure employed in the SRC survey of 1965. In 1975 the more common recall method was used wherein respondents were asked to report on activities carried out "yesterday." Robinson reports (1981) that the two approaches "generated activity estimates that differed little from one another" (p. 123), based on a subsample of the 1965 respondents who were tested using both methods. This was true of television, but radio, books, magazines, newspapers and movies were all given higher estimates under the recall technique (Robinson, 1977). The total mass media estimate for the recall method was 9.5 percent of the day, and 8.4 percent with the pre-planned technique. The commonly used recall method appears, then, to overestimate media use by 13 percent and to overestimate reading by approximately 60 percent, relative to the pre-planned approach. The latter is generally believed to produce the best results since recall is not involved but is less used because of the expense and extra contacts required. These points need to be kept in mind when data for the various media are examined.

The implication for the two SRC data sets is that the 1975 estimates for non-television media use may be too high since they were obtained by the recall method. Had they been obtained by the pre-planned technique the increase in television use would have seemed of even greater significance to someone adopting Robinson's perspective.

A final concern in the construction of items is that of the use of open versus closed-ended questions. Early studies tended more often to supply response categories than did later work. In such cases, the mid-points of the intervals were used to generate a weighted average time use estimate for this report's data set. The top category (greater than x hours) is more problematic, but a generally conservative approach was used by assuming that its mid-point lay one half interval higher than the boundary value. For example, if the intervals were 0 - 2, 2 - 4, more than 4 hours, then the subjects in the last interval were assumed to average 5 hours of media use.

Distortions created by the use of closed-ended questions are, however, more significant than assumptions involved in creating estimates by the above procedure. Jaroslovsky (1988) reports a study by Norbert Schwarz in which two comparable groups were asked to estimate their daily television viewing using

different response categories. The group which was presented with higher categories (intervals ranging from under 2.5 to over 4.5 hours) had twice as many estimates of over 2.5 hours than did the group provided with lower categories (under 0.5 hours to over 2.5 hours). The tendency seemed to be to present choices which are generally too low and thus to underestimate media use in the early studies which used this approach.

Open-ended questions also present problems for respondents, as noted in the discussions above concerning the "typical day" and "yesterday" techniques. They share the more fundamental problem of what is meant by "use" of a medium given that all Americans are not as monochronic as Hall may suggest, as well as basic issues of recall. The Roper Organization (1983) found that television viewing estimates within the same sample differed by over one-third depending on whether people were asked to estimate daily viewing (averaging 2.85 hours) or to estimate viewing by category which was then summed (averaging 4.05 hours).

The third methodological area to be addressed here is that of the results obtained among the interview, diary, telephone and meter methods. An additional area of concern involves media which are estimated in part by frequency data such as books read, movies attended, and newspaper and magazine subscriptions purchased.

The impact of mass media on lifestyles has also been measured by analysis of expenditures (McCombs and Eyal, 1980). This approach will not be included here except to note that, at least up until 1977, McCombs found that the media portion of total expenditures and percent of personal income remained essentially constant beginning in 1929. Ogan and Kelly (1956) did not find a change in these ratios, except for low-income groups, in a 1985 regional study, and deGrazia (1962) found that media expenditures dropped from 50% in 1950 to 45% in 1955 (as percent of all recreational expenditures) despite the diffusion of television during those years. This literature should at least be acknowledged as another approach to the same question of media lifestyle impacts, with the cursory conclusion that it also goes against the colonization of leisure claim.

Face-to-face or personal interviewing is the traditional form of most survey research. It was generally thought to produce the "best" and most trusted results, having been labelled "the standard by which survey research gained credibility" (Backstrom and Hursh-Cesar, 1981; p. 19). Some of its major proponents such as the Roper Organization seem to have fallen into the trap of positivism claiming, for example, that "Questions will not be biased for or against TV" (Roper Organization, 1983; p. 24) and that the questions were sequenced "in order to avoid bias" (p. 4) rather than to reduce or minimize

it. A major subjective element in personal interviewing probably stems from the various styles and motives of the interviewers, especially since they are not under the direct supervision of the researchers. Roper addresses this concern simply by noting that all interviews were conducted by experienced, trained interviewers. There may also be a related tendency for the respondent to attempt to please the interviewer by claiming to be involved in the subject area. Problems of recall and of definition, particularly what it means to be using a given medium, are still of primary concern with this method. Some of these problems have been detailed above, others are discussed below in connection with diary studies of viewer attentiveness. Personal interviewing has also been largely replaced by diary and telephone surveys, especially for national samples. It was often the method of choice in early local academic surveys, although these also tend to be the most suspect in terms of the quality of questions and the reporting of results.

The special case of complete time budget diaries has been discussed above. They are claimed to produce lower estimates for any given activity than do single-activity or even subset studies since in the latter case respondents inflate their estimates to please the researcher and to seem involved. This might explain why the SRC television data are lower than contemporaneous single-activity surveys, but not why they are also lower than Nielsen audimeter data.

Robinson (1977) has suggested that Nielsen meters produce overestimates because people who agree to carry them tend to be heavier viewers, and because the meters record times when the set is on but viewing is sporadic or even non-existent. Recent methodological studies reported by Beville (1985) confirm that as many as half of all viewers leave the room during a television show, most of them more than once. Forty to fifty percent are eating meals, doing chores or reading while the television is on. Kubey (1986) reports a study in which actual viewing time increased in metered homes. The use of written diaries is subject to the same potential for over-estimation. Robinson (1977) reports a study in which people who agreed to complete Nielsen's logs or viewing diaries were also videotaped and were found to have over-estimated their viewing by 25 percent despite the knowledge that they were being taped. On the other hand, Beville (1985) notes that diaries produce "a serious understatement of viewership of cable-originated programs" (p. 286).

Over-estimation due to inclusion of sporadic or inattentive use is likely with other media as well, especially radio and recorded music listening, and reading to a lesser extent. These problems suggest a fundamental limitation of all methodologies in the variety of ways in which they operationalize viewing, reading

or listening, either by machine or in the minds of respondents. This again implies that caution should be exercised in the formation of conclusions or proscriptions based on any mixed set of time use data. These significant discrepancies among survey methodologies have not disappeared despite over fifty years of research and development. Early radio listenership surveys are now easily seen to be biased towards high numbers due to the zeal of ratings services such as C.E. Hooper. Beville (1985) reports that their early telephone surveys asked respondents "What were you listening to on the radio when the telephone rang?" (p. 95; emphasis added). The commercial services normally determined audience size only, although they did occasionally generate time use estimates from the same surveys (e.g. Chappell and Hooper, 1943). Later reports by Nielsen, included in this study's data base, regularly include time use estimates derived from their ratings surveys.

It seems most significant, however, to note the recent dispute between the Birch and Arbitron radio ratings firms (Buckman, 1988). Birch employs telephone surveys based on a two-day listening period, while Arbitron uses a seven-day listening diary. Telephone surveys have been emphasized by the broadcast industries to the point where they are now regarded as comparable to personal interviewing in the quality of data generated (Groves and Kahn, 1979). The Arbitron ratings for certain older-skewed formats such as all-news were 42 percent higher than Birch's telephone ratings. It would seem logical that Arbitron's diaries are over-estimating their audience (and associated radio use), based on the research by Groves and Kahn, and also on the comments and research of Robinson discussed above. However, in the same industry study described by Buckman (1988) it is reported that Birch's telephone ratings are 37 percent higher than Arbitron's for younger format album-oriented rock stations. Buckman also notes that these two services' ratings are as different in 1988 as they were when first compared in 1982. There is clearly a fundamental problem involved in asking people to estimate media use, and this problem appears to be both method and age-specific.

The broadcast industries may have less cause for concern than would a media sociologist since they are primarily in need of a relative index of use, rather than an absolute measure of time spent. Time spent with other media has been of even less concern to the industries since they measure their reach or audience in numbers of copies, issues, or tickets sold.

Academic research has also described non-broadcast media primarily in terms of attendance and sales. Most of the data reported in this study for these media had to be converted from numbers (of attendances or copies) per person to time use per person by multiplying by the average time spent per attendance or

per copy. This introduces another source of error in the creation of total media time use estimates. Estimates of time spent reading books are the most problematic, since it is almost always reported in terms of numbers, and there appear to be no estimates of average time per book. Movie-going is also almost exclusively reported in terms of numbers (of attendances), but there are reasonable estimates of time spent per attendance. Newspapers and magazines are sometimes reported in terms of numbers (of copies or subscriptions), but there are direct estimates of time spent per day for each medium, especially newspapers.

1.4 Conclusion

The "ferment in the field" of communication (Journal of Communication, 1983) is by now old hat to most researchers, although there is a sense that for many a rift remains between those who use qualitative versus quantitative methodologies. The qualitative approach adopted here would ideally preceed any quantitative analysis especially one utilizing historical data sets. This paper has attempted to demonstrate that empiricists have not always acknowledged their own cultural and personal values, as well as limitations in their methodologies, in the collection and analysis of time use data. This author suggests that there is little cause or support for alarm over the results of mass media time use research in this country.

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